UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/742,695	QADEER ET AL.
	Examiner	Art Unit	
	SAIF A. ALHIJA	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 August 2008*.

2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-16,18,21,23 and 24* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-16,18,21,23 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1 and 3-16, 18, 21, and 23-24 have been presented for examination.

        Claims 2, 17, 19-20, and 22 have been cancelled.

Response to Arguments

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e),

was filed in this application after final rejection. Since this application is eligible for continued examination under

37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 August 2008 has been entered.

NON PRIOR ART ARGUMENTS

      i)   The Examiner notes that a 101 rejection has been provided for the claims below.

      ii)   Following Applicants amendments the 112 2nd rejection is withdrawn.

PRIOR ART ARGUMENTS

      iii)   Applicants argue that Tyrell teaches away from the claimed invention. Applicants state that the

atomic action stretching through a group of processes does not teach identifying atomic actions within a single

procedure. It is unclear what is meant by this assertion. How does the multiple processes aspect of the atomic actions

teach away from a single procedure especially since as per the Background of the specification of the instant

application a procedure summary is mainly a set of calculations performed by software? The Examiner is unsure if

Applicants intend a specific explicit definition of a procedure that is not explicitly claimed. It appears that

Applicants are stating that Tyrell teaches a more advanced version of reachability analysis where entry and exit

points can be predetermined. However since at the moment no explicit definition is present the Examiner contends

that the atomic actions and procedures of Tyrell read on those presented in the claims. Further it is noted that

Applicants arguments continue and interchange the terms process and procedure. The Examiner is puzzled since

based on the specification of the instant application discussed above a procedure appears to be a set of processes.

The Examiner would therefore interpret, as an example, P to be a procedure which encompasses processes P1-P3 for

which atomic actions are determined. With respect to the 103 rejection the inclusion of Reps was to provide to

Applicants a recitation of partial reachability, Tyrell discloses reachability as cited by the Examiner when stating

that Reps and Tyrrell are analogous art in that they both deal with reachability graphs, in preparation for Applicants

amending the claims to more precisely define the partial aspect of the procedure summary, **which they have not,** since the Examiner clearly indicated that **the broadest reasonable interpretation of "at least a portion" encompasses greater than 0% to less than or <u>equal to 100%.</u>** With respect to Applicants arguments against the combination of the references the Examiner notes that **KSR, 550 U.S. at ___, 82 USPQ2d at 1391 reads "The Supreme Court further stated that: <u>When a work is available in one field of endeavor,</u> design incentives and other market forces can prompt variations of it, <u>either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability.</u> For the same reason, if a technique has been used to improve one device, <u>and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.</u> Id. at ___, 82 USPQ2d at 1396." (Emphasis added)** The Examiner cannot see how a person of ordinary skill in the art would lack the skill to combine the references nor can the Examiner see how the use of reachability analysis in combination with multithreaded software would be unpredictable. The Examiner lastly notes that Applicants specification recites no less than 37 embodiments. It is unclear to which embodiments the claims refer or to which they are to be interpreted in light of and therefore following the broadest reasonable interpretation the combination of Tyrell and Reps renders the claims obvious.

> ## <u>EXAMINERS NOTE</u>
>
> iv)   Examiner has cited particular sections in the references applied to the claims for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.
>
> v)   The Examiner respectfully requests, in the event the Applicants choose to amend or add new claims, that such claims and their limitations be directly mapped to the specification, which provides support for the subject matter. This will assist in expediting compact prosecution.
>
> vi)   Further, the Examiner respectfully encourages Applicants to direct the specificity of their response with regards to this office action to the broadest reasonable interpretation of the claims as presented. This will avoid

issues that would delay prosecution such as limitations not explicitly presented in the claims, intended use

statements that carry no patentable weight, mere allegations of patentability, and novelty that is not clearly

expressed.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

MPEP 2106 recites:

The claimed invention as a whole must accomplish a practical application. That is, it must produce a

"useful, concrete and tangible result" State Street 149 F.3d at 1373, 47 USPQ2d at 1601-02. A process that consists

solely of the manipulation of an abstract idea is not concrete or tangibles. See In re Warmerdam, 33 F.3d 1354,

1360, 31 USPQ2d 1754, 1759 (Fed.Cir. 1994). See also Schrader, 22 F.3d at 295, 30 USPQ2d at 1459.

3.   i)   **Claims 1 and 3-16, 18, 21, and 23-24 are rejected** under 35 U.S.C. 101 because the claimed

invention pre-empts the field in which it takes part. The claims fail to provide a tangible result, and there must be a

practical application, by either

1) transforming (physical thing) or

2) by having the FINAL RESULT (not the steps) achieve or produce a useful (specific,

substantial, AND credible), concrete (substantially repeatable/non-unpredictable), AND tangible (real

world/non-abstract) result.

A claim that is so broad that it reads on both statutory and non-statutory subject matter, must be

amended. A claim that recites a computer that solely calculates a mathematical formula is not statutory.

The courts have also held that a claim may not preempt ideas, laws of nature or natural

phenomena. The concern over preemption was expressed as early as 1852. See Le Roy v. Tatham, 55 U.S.

(14 How.) 156, 175 (1852) (~A principle, in the abstract, is a fundamental truth; an original cause; a

motive; these cannot be patented, as no one can claim in either of them an exclusive right."); Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 132, 76 USPQ 280, 282 (194.8) .

Accordingly, one may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent "in practical effect would be a patent on the [idea, law of nature or natural phenomena] itself." Here the claims are so abstract and sweeping as to cover both known and unknown uses of multithreaded software procedure analysis. The end use may (i) encompass any type of multithreaded program (See specification page 3, lines 11-14) and (2) can be performed through any existing machinery or future-devised machinery or without any apparatus." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).

The claims listed above lack any particular application, and could potentially be applied to any field that encompasses data collection and modeling and could possibly be applied to in the future and the past, which pre-empts the industry from further research in the area. This leads to a rejection under U.S.C. 101.

Appropriate correction is required.

ii) **Claims 1 and 3-16, 18, 21, and 23-24 are rejected** under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972) the claims must result in a physical transformation or provide a "particular machine" for execution. The claims merely recite reachability analysis of a procedure and as such do not provide a physical transformation nor do the claims require a "particular machine" since any general purpose computer can carry out the analysis. As such the claims are rendered non-statutory.

Appropriate correction is required.

All claims dependent upon a rejected base claim are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. **Claim(s) 1 and 3-16, 18, 21, and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tyrrell et al. "CSP Methods for Identifying Atomic Actions in the Design of Fault Tolerant Concurrent

Systems", hereafter Tyrrell in view of Reps et al. "Precise Interprocedural Dataflow Analysis via Graph

Reachability", hereafter Reps.

Regarding Claim 1:

Tyrrell discloses A computer program product embodied on a first computer readable medium and

comprising code that when executed causes a computer to perform a method of generating a partial procedure

summary of a procedure of multithreaded software, wherein the procedure performs a plurality of actions when

executed, the method comprising:

during a reachability analysis of at least a portion of the multithreaded software reaching the procedure;

when the procedure is reached during the reachability analysis,

1)   identifying at least one plurality of the actions within the procedure as atomically modelable with respect to multithreaded execution of the procedure as atomically modelable actions wherein the atomically modelable actions are not subject to interruption by other threads; **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. Figure 1-2)**

2)   generating the at least one partial procedure summary of the procedure from the atomically modelable actions, wherein the at least one partial procedure summary comprises at least one state pair, wherein the at least one state pair models an initial state and a resulting state of the atomically modelable actions, **(Tyrrell. Page 633, Figure 3-4. Parallel processing and interleaving summaries. Figure 2.)**

during continuation of the reachability analysis, reaching the procedure a second time; and **(Tyrrell. Page 633, Figure 3-4. Parallel processing and interleaving summaries. Figure 2.)**

wherein if initial state of the' procedure reached the second time is the same as the initial state of the at least one partial procedure summary, then the resulting state is used as procedure state in the reachability analysis. **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. Figure 1-2)**

Tyrrell does not explicitly disclose performing a reachability analysis of **at least a portion (Claim Interpretation. In response to Applicants arguments that performing the entire reachability analysis does not anticipate the Examiner notes that the broadest reasonable interpretation of "at least a portion" encompasses greater than 0% to less than or equal to 100%.)** of the multithreaded software; when the procedure is reached during the reachability analysis,

the reachability analysis consulting the partial procedure summary to continue the reachability analysis.

However Reps discloses performing a reachability analysis of at least a portion of the multithreaded software; **(Reps. Page 54, Section 4, "realizable path reachability")**

when the procedure is reached during the reachability analysis, **(Reps. Page 54, Section 4, calledProc, profOf, and callers)**

the reachability analysis consulting the partial procedure summary to continue the reachability analysis. **(Reps. Page 54, Section 4, "summary edges represent (partial) information about how the dataflow value after a call depends on the dataflow value before the call.")**

Reps and Tyrrell are analogous art in that they both deal with reachability graphs.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the reachability analysis of Reps with the atomic modeling of multithreaded execution of Tyrrell in order to allow for precise analysis. (See Reps Abstract, first line)

Regarding Claim 3:

The reference discloses The computer program product of claim 1 further comprising:

modeling execution of the software such that the state pair that comprises the partial procedure summary is executed rather than the atomically modelable actions. **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. Figure 1-2)**

Regarding Claim 4:

The reference discloses The computer program product of claim 3 further comprising:

during modeling, comparing an indicated state invariant with a modeled state; **(Tyrrell. Figure 1-2. Page 630, Left Column, Paragraph 2, "Thus all processes in the atomic action cooperate in error detection.")**

responsive to determining the modeled state fails the indicated state invariant, indicating that a programming flaw is present in the software, wherein determining the modeled state fails the indicates state invariant comprises determining that a condition is false for at least one execution path. **(Tyrrell. Page 630, Left Column, Paragraph 2, "Thus all processes in the atomic action cooperate in error detection.")**

Regarding Claim 5:

The reference discloses The computer program product of claim 1, wherein the resulting state comprises at least one of a plurality of possible states of the multithreaded software after execution of the modeled procedure, the method further comprising:

storing an initial program counter location within the modeled procedure for the initial state;

storing a resulting program counter location within the modeled procedure for the resulting state; and

associating the initial program counter location within the modeled procedure and the resulting program counter location within the modeled procedure with the partial procedure summary. **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Boundaries and entry/exit lines)**

Regarding Claim 6:

The reference discloses The computer program product of claim 1,

wherein the reachability analysis consulting the partial procedure summary further comprises determining possible execution paths within the procedure and using the procedure summary to explore possible states. **(Tyrrell. Page 630, Right Column, Section III, First Paragraph, Reachability Graph/Petri Net)**

Regarding Claim 7:

The reference discloses The computer program product of claim 1 wherein the identifying comprises identifying a transaction boundary within the actions. **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Boundaries)**

Regarding Claim 8:

The reference discloses The computer program product of claim 1 wherein the identifying comprises identifying at least one of the plurality of actions as movable later in time with respect to actions executed by other threads without affecting a resulting end state.**(Tyrrell. Page 631, Left Column, Paragraph 3, Timelines and Time Critical Systems)**

Regarding Claim 9:

The reference discloses The computer program product of claim 1 wherein the identifying comprises identifying a sequence of actions having zero or more right movers followed by an atomic action   followed by zero or more left movers. **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Atomic Actions. Page 632-634, Algorithms/Interleaving and Elements S/F/K)**

Regarding Claim 10:

      The reference discloses The computer program product of claim 1 wherein the plurality of actions atomically with respect to multithreaded execution of the software is a subset of the plurality of actions of the procedure, the subset comprising less than all of the plurality of actions of the procedure. **(Tyrrell. Page 632-634, Algorithms/Interleaving and Elements S/F/K)**

Regarding Claim 11:

      Tyrrell discloses A computer program product embodied on a computer readable medium and comprising code that when executed causes a computer to perform a method of modeling multithreaded software, the method comprising:

      analyzing actions of the multithreaded software within the procedure such that actions that can be executed atomically within the procedure are determined wherein the actions that can be executable atomically are not subject to interruption by other threads based on the analyzing, generating a plurality of procedure summaries for the multithreaded software, the plurality of procedure summaries comprising respective start and end actions for the determined actions executed atomically, **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. See Also Reps, Definition 2.1 reciting "start node" and "exit node")** and

      wherein the procedure summaries comprises a plurality of modeled states of the multithreaded software for multithreaded execution of the multithreaded software. **(Tyrrell. Page 633, Figure 3-4. Parallel processing and interleaving summaries. Figure 1-2)**

      However Tyrrell does not explicitly disclose performing a reachability analysis of the multithreaded software;

      during the reachability analysis, reaching a procedure; **(Tyrrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. See Also Reps, Definition 2.1 reciting "start node" and "exit node")**

during the reachability analysis, again reaching the procedure and reusing the plurality of procedure

summaries to determine actions executable atomically; **(Tyrrell. Page 633, Figure 3-4. Parallel processing and**

interleaving summaries. Figure 1-2)

However Reps discloses performing a reachability analysis of the multithreaded software; **(Reps. Page 54,**

Section 4, "realizable path reachability")

during the reachability analysis, reaching a procedure; **(Reps. Page 54, Section 4, calledProc, profOf, and**

callers)

during the reachability analysis, again reaching the procedure and reusing the plurality of procedure

summaries to determine actions executable atomically; **(Reps. Page 54, Section 4, "summary edges represent**

(partial) information about how the dataflow value after a call depends on the dataflow value before the call"

as well as "each iteration of main loop in procedure ..." is analogous to the reuse. Page 49, Section 1.i,

"atomic dataflow")

Reps and Tyrrell are analogous art in that they both deal with reachability graphs.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the

reachability analysis of Reps with the atomic modeling of multithreaded execution of Tyrrell in order to allow

for precise analysis. (See Reps Abstract, first line)

Regarding Claim 12:

The reference discloses The computer program product of claim 11 wherein at least one of the

partial procedure summaries comprises at least two or more partial procedure summaries summarizing a procedure.

(Tyrell. Page 633, Figure 3-4. Parallel processing and interleaving summaries.)

Regarding Claim 13:

The reference discloses The computer program product of claim 11 wherein at least one of the partial

procedure summaries comprises at least one partial procedure summary for a procedure, wherein the partial

procedure summary summarizes less than all of the procedure. **(Tyrell. Claim Interpretation. A summary by**

definition is less than what it summarizes. Page 633, Figure 3-4. Parallel processing and interleaving

summaries.)

Regarding Claim 14:

    The reference discloses The computer program product of claim 11 wherein the evaluating comprises:

    identifying a series of transactions within the multithreaded software; **(Tyrell. Page 630, Section II, Left**

Column, Last Paragraph, Concurrent Systems and Atomic Actions. Page 633, Figure 3-4. Parallel processing

and interleaving summaries. Figure 1-2) and

    modeling the transactions via the partial procedure summaries. **(Tyrell. Page 630, Section II, Left**

Column, Last Paragraph, Concurrent Systems and Atomic Actions. Page 633, Figure 3-4. Parallel processing

and interleaving summaries. Figure 1-2)

Regarding Claim 15:

    The reference discloses A computer-implemented system for modeling multithreaded software, the system

comprising:

    a model checker operable to analyze a model of the multithreaded software via checking the model of the

multithreaded software for programming flaws, the model checker comprising: **(Tyrell. Section III discusses error**

detection, as well as the Abstract and intent of the reference dealing with error detection as well as recovery.

Further the last paragraph of Section I states the placement of "fault tolerance software structures" as well as

the references discussion of multiple processes)

    the model of the multithreaded software,

    wherein the model comprises:

    a plurality of partial procedure summaries modeling beginning states and ending states of partial summaries

of procedures within the multithreaded software during multithreaded execution of the multithreaded software, the

partial procedure summaries comprising the start and end states of sets of actions within the procedures, the actions

atomically modelable with respect to multithreaded execution of the software in that the atomically modelable

actions will all be performed within a single procedure by a same thread; and **(Tyrell. Page 630, Section II, Left**

Column, Last Paragraph, Concurrent Systems and Atomic Actions. Page 633, Figure 3-4. Parallel processing and interleaving summaries. Figure 1-2)

a reachability analyzer operable to employ the partial procedure summaries instead of the sets of actions to generate modeled states of the software. **(Tyrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. Page 633, Figure 3-4. Parallel processing and interleaving summaries. Figure 1-2)**

Regarding Claim 16:

The reference discloses The computer implemented system of claim 15 wherein at least one of the partial procedure summaries comprises a partial procedure summary summarizing actions deemed to have occurred one after another without interruption by another thread. **(Claim Interpretation. Actions occurring without interruption is the definition of an atomic action. Tyrell. Page 630, Section II, Left Column, Last Paragraph, Concurrent Systems and Atomic Actions. Figure 1-2)**

Regarding Claim 18:

The reference discloses the computer implemented system of claim 16 wherein the system is operable to detect programming flaws via comparing an indicated state invariant with the modeled states. **(Tyrell. Page 630, Left Column, Paragraph 2, "Thus all processes in the atomic action cooperate in error detection.")**

Regarding Claim 21:

The reference discloses. The computer program product of claim 1, wherein the at least one state pair comprises an initial state of the procedure and at least one of a plurality of possible states of the multithreaded software after execution of the modeled procedure. **(See rejection for claim 1)**

Regarding Claim 23:

The reference discloses The computer program product of claim 1, wherein the resulting state is in a location in the procedure prior to the location of the initial state in the procedure. **(See 112 2nd rejection above)**

(Tyrell. Page 635, bottom right, "result := SequentiallyPostDependent")

(Reps. Figure 4)

Regarding Claim 24:

Tyrell and Reps do not explicitly recite The computer program product of claim 1, wherein the partial

procedure summary of the procedure of multithreaded software is embodied on a second computer readable

medium.

However it would have been obvious to one of ordinary skill in the art at the time of the invention to

utilize a second computer readable medium for purposes of modularity.

Conclusion

6.   All Claims are rejected.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be

directed to SAIF A. ALHIJA whose telephone number is (571)272-8635. The examiner can normally be reached on

M-F, 11:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah

can be reached on (571) 272-22792279. The fax phone number for the organization where this application or

proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information

Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR

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Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SAA   /Kamini S Shah/
                                                               Supervisory Patent Examiner, Art Unit 2128

October 23, 2008